

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
REQUEST FOR FILING NATIONAL PHASE OF
PCT APPLICATION UNDER 35 U.S.C. 371 AND 37 CFR 1.494 OR 1.495

To: Asst. Commissioner of Patents
 and Trademarks
 Washington, D.C. 20231

(Our Deposit Account No. 03-3975)

09/530867

TRANSMITTAL LETTER TO THE UNITED STATES
 DESIGNATED/ELECTED OFFICE (DO/EO/US)

Atty Dkt: PM 268772 /1144015/DV/MB
M# /Client Ref.

From: Pillsbury Madison & Sutro LLP, IP Group:

Date: May 5, 2000

This is a **REQUEST** for **FILING** a PCT/USA National Phase Application based on:

- | | | |
|--|--|---|
| 1. International Application

<u>PCT/CH97/00425</u>
<u>↑ country code</u> | 2. International Filing Date

7 November 1997
Day <u>MONTH</u> Year | 3. Earliest Priority Date Claimed

<u>7 November 1997</u>
Day <u>MONTH</u> Year
(use item 2 if no earlier priority) |
|--|--|---|
4. Measured from the earliest priority date in item 3, this PCT/USA National Phase Application Request is being filed within:

- (a) ☐ 20 months from above item 3 date (b) ☒ 30 months from above item 3 date,
 (c) Therefore, the due date (unextendable) is May 7, 2000

5. Title of Invention IDENTIFICATION CARD AND IDENTIFICATION METHOD

6. Inventor(s) RITTER et al.

Applicant herewith submits the following under 35 U.S.C. 371 to effect filing:

7. ☒ Please immediately start national examination procedures (35 U.S.C. 371 (f)).
8. ☐ A copy of the International Application as filed (35 U.S.C. 371(c)(2)) is transmitted herewith (file if in English but, if in foreign language, file only if not transmitted to PTO by the International Bureau) including:
- a. ☐ Request;
 b. ☐ Abstract;
 c. pgs. Spec. and Claims;
 d. sheet(s) Drawing which are ☐ informal ☐ formal of size ☐ A4 ☐ 11"
9. ☒ A copy of the International Application has been transmitted by the International Bureau.
10. A translation of the International Application into English (35 U.S.C. 371(c)(2))
- a. ☒ is transmitted herewith including: (1) ☒ Request; (2) ☒ Abstract;
 (3) 14 pgs. Spec. and Claims;
 (4) 4 sheet(s) Drawing which are:
 ☐ informal ☒ formal of size ☒ A4 ☐ 11"
- b. ☐ is not required, as the application was filed in English.
 c. ☐ is not herewith, but will be filed when required by the forthcoming PTO Missing Requirements Notice per Rule 494(c) if box 4(a) is X'd or Rule 495(c) if box 4(b) is X'd.
 d. ☒ Translation verification attached (not required now).

RE: USA National Filing of PCT/CH97/00425

526 Rec'd PCT/PTO 05 MAY 2000

11. ☒ **PLEASE AMEND** the specification before its first line by inserting as a separate paragraph:
a. ☒ --This application is the national phase of international application PCT/CH97/00425
filed November 7, 1997 which designated the U.S.--
b. ☐ --This application also claims the benefit of U.S. Provisional Application No.
60/_____, filed _____.
12. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)), i.e., **before 18th month from first priority date above in item 3, are transmitted herewith (file only if in English) including:**
13. ☒ PCT Article 19 claim amendments (if any) have been transmitted by the International Bureau
14. ☒ Translation of the amendments to the claims **under PCT Article 19 (35 U.S.C. 371(c)(3)), i.e., of claim amendments made before 18th month, is attached (required by 20th month from the date in item 3 if box 4(a) above is X'd, or 30th month if box 4(b) is X'd, or else amendments will be considered canceled).**
15. **A declaration of the inventor (35 U.S.C. 371(c)(4))**
a. ☐ is submitted herewith ☐ Original ☐ Facsimile/Copy
b. ☒ is not herewith, but will be filed when required by the forthcoming PTO Missing Requirements Notice per Rule 494(c) if box 4(a) is X'd or Rule 495(c) if box 4(b) is X'd.
16. **An International Search Report (ISR):**
a. Was prepared by ☒ European Patent Office ☐ Japanese Patent Office ☐ Other
b. ☒ has been transmitted by the international Bureau to PTO.
c. ☒ copy herewith (3 pg(s).) ☒ plus Annex of family members (2 pg(s).).
17. **International Preliminary Examination Report (IPER):**
a. ☒ has been transmitted (if this letter is filed after 28 months from date in item 3) in English by the International Bureau with Annexes (if any) in original language.
b. ☐ copy herewith in English.
c.1 ☒ IPER Annex(es) in original language ("Annexes" are amendments made to claims/spec/drawings during Examination) including attached amended:
c.2 ☒ Specification/claim pages #2, 2a, 4, 10, 11 claims #1-34
Dwg Sheets #4
d. ☒ Translation of Annex(es) to IPER **(required by 30th month due date, or else annexed amendments will be considered canceled).**
18. **Information Disclosure Statement** including:
a. ☒ Attached Form PTO-1449 listing documents
b. ☐ Attached copies of documents listed on Form PTO-1449
c. ☒ A concise explanation of relevance of ISR references is given in the ISR.
19. ☐ **Assignment** document and Cover Sheet for recording are attached. Please mail the recorded assignment document back to the person whose signature, name and address appear at the end of this letter.
20. ☒ Copy of Power to IA agent.
21. ☐ **Drawings** (complete only if 8d or 10a(4) not completed): ____ sheet(s) per set: ☐ 1 set informal;
☐ Formal of size ☐ A4 ☐ 11"
22. ☐ ____ (No.) **Verified Statement(s)** establishing "small entity" status under Rules 9 & 27
23. **Priority** is hereby claimed under 35 U.S.C. 119/365 based on the priority claim and the certified copy, both filed in the International Application during the international stage based on the filing in (country) Switzerland of:

	<u>Application No.</u>	<u>Filing Date</u>		<u>Application No.</u>	<u>Filing Date</u>
(1)	PCT/CH97/00425	November 7, 1997	(2)	_____	_____
(3)	_____	_____	(4)	_____	_____
(5)	_____	_____	(6)	_____	_____

a. ☒ See Form PCT/IB/304 sent to US/DO with copy of priority documents. If copy has not been received, please proceed promptly to obtain same from the IB.
b. ☐ Copy of Form PCT/IB/304 attached.

RE: USA National Filing of PCT/CH97/00425

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24. Attached: Form PCT/IB/306 Notification of the Recording of a Change

25. Preliminary Amendment: ATTACHED

25.5 Per Item 17.c2, **cancel original** pages # _____, claims # _____, Drawing Sheets # _____26. **Calculation of the U.S. National Fee (35 U.S.C. 371 (c)(1)) and other fees is as follows:**
Based on amended claim(s) per above item(s) ☐ 12, ☒ 14, ☒ 17, ☒ 25, ☐ 25.5 (hilitte)

Total Effective Claims	minus 20 =	x \$18/\$9	= \$0	966/967
Independent Claims	minus 3 =	x \$78/\$39	= \$0	964/965
If any proper (ignore improper) Multiple Dependent claim is present,		add \$260/\$130	+0	968/969

BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(4)): → → BASIC FEE REQUIRED, NOW → → → →

A. If country code letters in item 1 are **not** "US", "BR", "BB", "TT", "MX", "IL", "NZ", "IN" or "ZA" ↓

See item 16 re:

1. Search Report was <u>not</u> prepared by EPO or JPO -----	add \$970/\$485		960/961
2. Search Report was prepared by EPO or JPO -----	add \$840/\$420	+840	970/971

SKIP B, C, D AND E UNLESS country code letters in item 1 are "US", "BR", "BB", "TT", "MX", "IL", "NZ", "IN" or "ZA" ↓

→ <input type="checkbox"/> B. If <u>USPTO</u> did not issue <u>both</u> International Search Report (ISR) <u>and</u> (if box 4(b) above is X'd) the International Examination Report (IPER), -----	add \$970/\$485	+0	960/961
(only) → <input type="checkbox"/> C. If <u>USPTO</u> issued ISR but not IPER (or box 4(a) above is X'd), -----	add \$690/\$345	+0	958/959
(one) → <input type="checkbox"/> D. If <u>USPTO</u> issued IPER but IPER Sec. V boxes <u>not all</u> 3 YES, -----	add \$670/\$335	+0	956/957
(of) → <input type="checkbox"/> E. If international preliminary examination fee was paid to <u>USPTO</u> and Rules 492(a)(4) and 496(b) <u>satisfied</u> (IPER Sec. V <u>all</u> 3 boxes YES for <u>all</u> claims), -----	add \$96/\$48	+0	962/963
(these) 4) →			
(boxes)			

27. **SUBTOTAL = \$840**

28. If Assignment box 19 above is X'd, add Assignment Recording fee of ----\$40 +0 (581)

29. Attached is a check to cover the ----- **TOTAL FEES \$840**

Our Deposit Account No. 03-3975

Our Order No. 60237

268772

C#

M#

CHARGE STATEMENT: The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any missing or insufficient fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under Rules 16-18 and 492 (missing or insufficient fee only) now or hereafter relative to this application and the resulting Official document under Rule 20, or credit any overpayment, to our Account/Order Nos. shown above for which purpose a duplicate copy of this sheet is attached.

This CHARGE STATEMENT does not authorize charge of the issue fee until/unless an issue fee transmittal form is filed

Pillsbury Madison & Sutro LLP
Intellectual Property Group

By Atty: Dale S. Lazar

Sig: 

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Atty/Sec: DSL/nlh**NOTE:** File in duplicate with 2 postcard receipts (PAT-103) & attachments.

09/530867

526 Rec'd PCT/PTO 05 MAY 2000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF

RITTER et al.

Group Art Unit: Unknown

Appln. No.: New Application

Examiner: Unknown

Filed: Herewith

TITLE: INDENTIFICATION CARD AND
IDENTIFICATION METHOD

May 5, 2000

PRELIMINARY AMENDMENT

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

Sir:

Entry and consideration of the following amendments in the above-identified application are requested.

IN THE CLAIMS:

Please amend the claims as follows:

Claim 2, line 1, change "the preceding claim" to --claim 1--.

Claims 7, 11, 12, 13, 14, 15, 16, 17 and 18, line 1, change "one of the preceding claims" to --claim 1--.

Claim 8, line 1, change "the preceding claim" to --claim 7--.

Claim 9, line 1, change "the preceding claim" to --claim 8--.

Claim 20, line 1, change "the preceding claim" to --claim 19--.

Claim 21, line 1, change "the preceding claim" to --claim 20--.

Claim 28, line 1, change "one of the claims 19 to 27" to --claim 19--.

Claim 29, line 1 change "one of the claims 19 to 28" to --claim 19--.

Claim 31, line 1, change "the preceding claim" to --claim 30--.

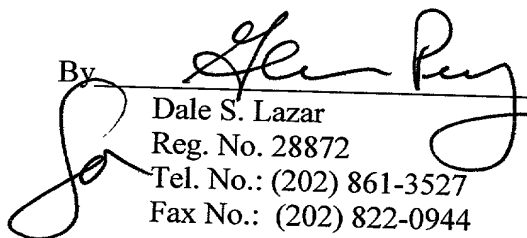
REMARKS

The amendments to the claims were made to eliminate the multiple dependencies. No new matter was intended to be added, nor is any new matter believed to have been added. Accordingly, an early action on the merits is earnestly solicited.

Respectfully submitted,

PILLSBURY MADISON & SUTRO LLP

By

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APPLICATION UNDER UNITED STATES PATENT LAWS

Atty. Dkt. No. PM 268772

(M#)

Invention: IDENTIFICATION CARD AND IDENTIFICATION METHOD

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- ☐ Provisional Application
- ☐ Regular Utility Application
- ☐ Continuing Application
- ☒ PCT National Phase Application
- ☐ Design Application
- ☐ Reissue Application
- ☐ Plant Application
- ☐ Substitute Specification
Sub. Spec Filed _____
in App. No. _____ / _____
- ☐ Marked up Specification re
Sub. Spec. filed _____
In App. No. _____ / _____

SPECIFICATION

4/PR+5

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Identification Card and Identification Method

This invention relates to an identification card and an identification method. The invention relates particularly, but not exclusively, to a chip card to identify
5 subscribers in an electronic data processing system or in a telecommunications system.

Numerous systems require identification of users (called subscribers here) in order, for example, to access protected data, to order services or products, to make transactions or to gain access to protected zones. Computer networks,
10 mobile radio networks, pay TV systems, access control devices, point-of-sale (POS) terminals, data bases, etc., can be mentioned as examples of such systems.

A well-known method to identify subscribers uses a public alphanumerical identification and a secret password which every subscriber is asked to give. This
15 often employed method is slow and tedious for the subscriber, who has to type in a lot of symbols manually to identify himself. Moreover this method does not offer a high degree of security since passwords, as is well known, can be observed or found out.

A more secure method requires subscribers to show an object which is
20 difficult to copy, such as, for example, a key or a chipcard, to identify themselves. An object is of course harder to steal than a password, and its disappearance is usually noticed quickly so that access to the system can be blocked immediately. Often a password is also required in addition to the key or the chipcard.

An identification chipcard usually contains identification parameters, which
25 are usually written in a protected memory area of the chipcard during the personalization of the chipcard. The personalization of the card takes place usually at the service provider, for example, a branch of a bank in the case of an automatic teller card. It is therefore not possible, generally speaking, to supplement the identification parameters or to change them without replacing the card or at least
30 without bringing the card to the service provider.

Since the number of systems requiring an identification of the subscriber continues to grow, subscribers are forced to possess more and more identification

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cards to identify themselves, for example, at automatic teller machines, at access control installations or in various telecommunications systems. Most cards require moreover a different password from the user. This identification method is therefore not practical, and requires users to remember many
5 different passwords.

Proposed in the patent application WO 96/38814 is a chip card having an interface with a contact and an interface without a contact, which card has different memory areas for coupling via these different interfaces so that the card can carry out different functions, for example the function of a telephone
10 value card and the function of a ticket.

Proposed in the patent application EP 786 915 A2 is a SIM (Subscriber Identification Module) card in which identical identification numbers are stored several times in order to identify the respective subscriber in several mobile networks.

15 Described in the patent application WO 94/30023 is a method of loading data and/or applications onto a SIM card via an air interface so that the card is provided with additional services and can be used as a multi-service card.

One object of the present invention is to propose improved identification cards, identification methods and identification systems.

20 According to the present invention, these objects are attained in particular through the features of the characterizing part of the independent claims. Further preferred embodiments follow, moreover, from the dependent claims and from the specification.

In particular, these objects are attained through a SIM (Subscriber
25 Identity Module) chipcard, for example by means of a SIM chipcard as defined in the technical specification GSM 11.11 or GSM 11.14, which has been available since 1995, or respectively 1996, from the Secretariat of the European Telecommunications Standards Institute, F-06921 Sophia Antipolis

AMENDED PAGE

2a

(France).

SIM cards are used in mobile radio networks, such as, for example, in the GSM (Global System for Mobile Communications) network to store the identity of the subscribers. Entailed is a removable chipcard, so the user can
5 receive the calls intended for him on the mobile device of his choice by transferring the SIM card from one device to another. The mobile stations (MS), such as, for example, GSM cellular telephones, are therefore made up of two elements, the mobile device and the SIM chipcard.

SIM cards exist today in two standard formats. The full-size format
10 corresponds to the size of a credit card, whereas the plug-in format, which is adapted especially to the miniaturized, mobile telephones, is approximately 25 mm by 10 mm. The functions of the cards in these two formats are identical.

The SIM cards generally contain data processing means, usually a micro-controller integrated into a chip. This microcontroller contains a memory
15 area, usually an EEPROM, which allows programs and/or data files to be stored, as well as processing means which are able to execute various algorithms, in particular algorithms which allow subscriber identification and communication encryption to be carried out.

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AMENDED PAGE

The processing means have access to programs and to data files in the memory area of the card. These files comprise in particular a subscriber identification IMSI (International Mobile Subscriber Identity), which is stored in a file EFIMSI on the card, and which identifies the subscriber in a GSM mobile telephone network.

According to the invention, the SIM card comprises one or more additional new data files in the microcontroller's memory area, which contain identification parameters to identify the subscribers to other systems in these other systems.

With these additional identification parameters the SIM chipcard can be used not only to identify the subscriber in another mobile radio network, but also to identify him in various other systems.

According to another aspect of the invention, these additional identification parameters are communicated from a server connected to an SIM server to the SIM card of the subscriber.

It is definitely possible to add identification parameters for new systems at any time in order to extend the application possibilities of already distributed SIM cards. The identification parameters for any system and in any already distributed SIM card can also be supplemented or changed remotely at any time.

The present invention will be better understood with the aid of the following description, which is given as an example and is illustrated by these figures:

Figure 1 is a block diagram showing a system according to the invention.

Figures 2a and 2b show two different parameter tables in the SIM card, based on two different organization variants.

Figure 3 is a block diagram of a variant of the invention in which the terminal device of the subscriber is a mobile computer, which can be connected to different systems.

Figure 4 is a block diagram of another variant of the invention in which the terminal device of the subscriber is a mobile telephone which can be connected to different systems.

The system shown in Figure 1 comprises a SIM chipcard 1, as is already being used in, among other things, GSM (Global System for Mobile Com-

munications), DECT (Digital European Cordless Telephone System), DCS (Digital Cordless System) or PCS mobile devices, or also in future fixed networks with subscriber identification through chipcards. The SIM card can be either a full-size card or a plug-in card. By means of a contact area 11 on the surface of the card,
 5 it can be connected to a terminal (not shown), for example a mobile telephone, a PC, a laptop or a palmtop. The card contains data processing means 10, for example a microcontroller integrated into a chip.

A memory area, preferably an EEPROM, is contained in the microcontroller 10 or is connected thereto. The memory area contains programs and data files,
 10 which are arranged in a hierarchical directory structure. The data files comprise, among other things, elementary files (EF), such as are defined in the above-mentioned technical specification GSM 11.11 or GSM 11.14.

According to the invention, the SIM card 1 contains in addition one or more new tables 101 and 102 in the memory area of the microcontroller 10. These
 15 additional tables contain identification parameters in order to identify the subscriber in other systems. The tables, which will be described more closely later with reference to Figure 2, can be contained in one or more elementary files EF in the memory area of the chipcard 1. The other systems could be, for example, a mobile network, a fixed network or a WWW network, a computer network (NC,
 20 network computer), such as, for example, an internet, an intranet or an extranet, a pay TV system, a pay radio system, a traffic routing system (GPS, TPS), a bank, a point-of-sale (POS) terminal, etc. Depending upon the identification parameters in the tables, the subscriber can be identified in all these systems using a single card 1.

25 The memory area of the microcontroller 10 comprises moreover one or more new EXE data files (program) to administer these additional identification parameters. The memory area preferably contains new software modules in order to access the identification parameters in the received SMS short messages and to store these received identification parameters.

30 The SMS card preferably further contains an induction coil 12, in order to be able to communicate in a contactless way with external devices. The SIM microcontroller in this case will be preferably supplemented by another electronic

module (not shown), which is connected to the coil 12 and which is responsible for the contactless communication with an external device.

The SIM card preferably contains in addition known means to transmit and receive SMS short messages, as well as known filter means to recognize and
5 interim store special short messages, preferably according to the SICAP (SIM CARD Application Platform) method, which is described in the patent EP 0 689 368 B1, among others. Encryption and signing means are provided moreover in order to decrypt the received SMS messages and to encrypt and sign the transmitted SMS messages. As an encryption method, the TTP (Trusted Third Party)
10 method can be used, for example, or an encryption method which works according to a point-to-point process.

The SIM card 1 is connected to a mobile radio network, for example a GSM network, when inserted into a mobile device (not shown). A SIM server 3 for administration of short messages (SSC, Short Message Service Center) is
15 likewise connected to the network 2. The SIM server 3 is equipped in such a way that it can communicate with the SIM card 1 over the mobile radio network by means of special SMS short messages. The known filter means in the SIM server and in the SIM cards enable special services, such as the exchange of data, instructions and programs between the SIM server and an SIM card to be per-
20 formed.

A TTP server 4 is also connected to the SIM server 3 in order to encrypt at least certain special SMS short messages and thereby ensure that the confidentiality, authenticity of identity and authenticity of information, integrity and indisputableness of origin are guaranteed. As already mentioned, a point-to-point encryption and signing can also be used.
25

Various service providers 7 are connected to the SIM server 3 through the mobile radio network 2 or through a special network 6. The special network 6 can be, for example, an internet, intranet or extranet, or also a X25 network. The service providers administer the mentioned other systems 8.

30 In order to identify himself to a service provider 7 and in order to use the system offered by this provider, the subscriber must identify himself beforehand with the identification parameters available in his chipcard, for example with a

password stored in the card 10. According to the invention, identification parameters for various systems are stored in the memory area of a single SIM card 1. Different systems can access the required identification parameters through a kind of virtual bus in the SIM card 1. The service provider puts, for this purpose, the necessary parameters in a table 5 to which the SIM server 3 has access. The parameter table is preferably stored in the SIM server 3. It contains the parameters for each subscriber and for each system 8.

The SIM server 3 carries out the data management between the service provider 7, the table 5 and the SIMs 1. The communication takes place encrypted. Via SIM server 3, each service provider 7 has access to a memory area 101, 102, of the SIM cards 1 subscribing to the system 8 of that service provider; in this memory area he can put the necessary parameters for use of his system. These parameters are communicated by the SIM server 3 and by means of special SMS short messages.

The SIM server 3 draws up and manages the parameter table 5. The parameter table 5 contains a copy of all identification parameters communicated to the subscribers.

Figure 2 shows two different possibilities of storing identification parameters in the memory area of the SIM card 10. These parameters can be stored, for example, in different tables 101, as is indicated diagrammatically in Figure 2a. A table corresponds then to a service or system, to which the subscriber has subscribed. A table can then contain, for example, the parameters which allow the card to be used as an identifying SIM card in a GSM network, whereas a second table contains the identification parameters for a computer network, and a third contains the identification parameters for a pay TV system, etc. These different tables can be stored in a single EF data file, or preferably each table in a different data file. In the latter case a new data file must be created each time a subscriber subscribes to a new system.

It is also possible, however, to store identification parameters for different systems in a single table 102, as shown diagrammatically in Figure 2b. This table 102 then contains a first area 1020, which indicates the common parameters x, y, z for each system – for example, the name of the subscriber. Other areas 1021,

1022, 1023, etc. contain, on the other hand, the parameters a, b,..., f... specific to each system subscribed to. For example, the area 1021 gives the identification parameters IMSI (International Mobile Subscriber Identity) and MSISDN (Mobile Station Identity Number), with which the subscriber to a GSM network can be
 5 identified, and the area 1022 contains parameters to identify him in a MNC network, etc.

The SIM card 1 parameterized in this way can be used in different systems in that, for example, it is inserted directly into a card reader of that system – for example into an automatic teller machine in the case of a banking system. The
 10 card reader can then access the required identification parameters through the contact area 11 on the card. The card reader can, for example, have direct access to the respective memory area 1022, 1023, etc.

In a preferred variant, however, the systems 8 can access the identification parameters a, b, ... only through the data processing means 10 in the card. Preferably in this case each system is ensured access to the parameters as if the
 15 individual systems were isolated (virtual bus).

Certain systems require the identification parameters to be introduced according to a predefined protocol. For example, the card reader during subscriber identification often makes a number of inquiries to the chipcard, which the card
 20 must respond to in accordance with the respective identification parameters. This protocol can be executed by the processor on the card, which is specially programmed for this purpose with a specific program in the memory area of the card.

If a system requires of the card that it executes a system-specific, otherwise not available identification protocol, it is possible, according to the invention,
 25 for the EXE file needed to carry out this protocol to be communicated to the card. This program is preferably communicated by means of special SMS short messages through the network 2, in the same way as normal identification parameters. As soon as the SIM card has recognized that it is located in a card reader which requires such an identification protocol, then it executes the respective
 30 program immediately. The SIM card then acts as a normal identification card of this system. The protocol program is preferably programmed in the JAVA language.

The identification parameters can contain, for example, a public identification (name, country, ID, etc.) and a secret password of the subscriber. It is however also possible to store any other parameter, depending upon the subscribed-to system. For example, biometric parameters can also be stored, such as, for example, voice parameters, facial features or retinal patterns of the subscriber. The parameter tables 101, 102 can also contain, however, all other parameters or data used for the identification protocol.

Figure 3 is a block diagram of a variant of the invention, in which the terminal device of the subscriber is a mobile computer 13, which can be connected to different systems 8. The mobile computer 13 comprises a chipcard reader in order to be able to read in particular SIM chipcards 1. Various applications in the computer 13 enable it to be connected to different systems, for example to a computer network, to an internet, to an intranet, or to an extranet, or to a pay TV network. These application programs, with which the computer can be connected to the various external systems, can all be executed by this computer and, in a multi-tasking operating system, for example, can be shown at the same time in a plurality of windows 130, 131, 132, 133 on the screen of the mobile computer. The connection to these different systems is achieved with suitable connection means D, E, for example with the aid of a modem and/or a network adapter.

The mobile computer 13 comprises moreover means to connect it to a mobile radio network 2, these means being integrated into the computer 13 or being located outside this computer. In this way the service providers 7 of the various systems 8 can communicate identification parameters and identification protocol programs in the SIM cards 1 of their subscribers through a network 6 and a SIM server 3, as described above. These identification parameters are more-over copied in the table 5, to which the SIM server 3 has access. The various messages A, B, C between the service providers, the SIM server 3 and

the terminal 1 are preferably encrypted and signed by mean of TTP, as described above.

The subscriber equipped with the mobile computer 13 can use various applications to the different systems 8, the connection requiring the reading of
5 corresponding identification parameters on the SIM card 1, and, should the situation arise, execution of an identification protocol program stored on the card 1, as described above.

Figure 4 is a block diagram of a variant of the invention in which the terminal device of the subscriber is a mobile telephone 14, which can be
10 connected directly to various systems 8 through different interfaces 12, 140. These additional interfaces comprise, for example, an induction coil 12 in the SIM card 1, with which the SIM card 1 can communicate in a contactless way with an external system 8. For this purpose, the system 8 is also connected to an inductive transmitter-receiver 80. The mobile device 14 can also
15 communicate through an optional infrared transmitter-receiver 140 in a contactless way with a transmitter receiver 81 connected to a system 8. Other means to connect the mobile telephone 14 to other systems can also be used within the framework of the invention. For example, the mobile telephone can be connected to external systems through the normal mobile radio network 2 or
20 by means of a connector.

The service providers 7 of the various systems 8 connected to the SIM server 3 through a network (not shown) can subsequently load identification parameters and possibly identification protocol programs into the SIM cards of their subscribers through the SIM server 3, as described above. These identifi-
25 cation parameters are moreover copied into the table 5, to which the server 3 has access. The various messages A, B, C between the service providers, the

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9a

SIM server 3 and the mobile device 14 are preferably encrypted by means of TTP.

With the identification parameters stored in the mobile device 14, the subscriber can identify himself in the various systems 8 in order to use these
5 systems.

Advantageous with this invention is that the various service providers 7 can control the services they offer as needed. Since, for administration of parameters, there exists only one interface to the SIM cards 1, mechanisms for billing of all the networked systems can easily be set up.

10 In an embodiment variant, the identification card 1 comprises several contact areas in order to connect it to various systems 8.

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Claims

1. Identification card (1) for a subscriber to a mobile radio network (2) which comprises a contact area (11) in order to connect it to a mobile device (13, 14), and electronic memory means (10) which contain the identification
5 parameters of the subscriber to the said mobile radio network,

characterized in that one or more other identification parameters are stored in the said memory means for the identification of the subscriber in at least one other system, at least one said other system not being a mobile radio network.

10 2. Identification card according to the preceding claim, characterized in that the said other identification parameters are stored in a single table (102) in the said memory means (10).

3. Identification card according to claim 1, characterized in that the said other identification parameters are stored in different tables (101) in the said
15 memory means (10).

4. Identification card according to claim 1, characterized in that the said other identification parameters are accessible through the said contact area (11).

5. Identification card according to claim 1, characterized in that it
20 comprises a plurality of contact areas in order to connect it to different systems (8).

6. Identification card according to claim 1, characterized in that it further contains an induction coil (12) through which it is possible to access the said other identification parameters.

25 7. Identification card according to one of the preceding claims, characterized in that it is so equipped that it can communicate with a SIM server (3) in the said mobile radio network (2) through SMS messages, and in that it comprises means to access the said identification parameters in the said SMS messages as well as means to store these identification parameters in the

said memory means (10).

8. Identification card according to the preceding claim, characterized in that it further comprises decryption means for the said short messages.

9. Identification card according to the preceding claim, characterized in
5 that the said decryption means work according to the TTP method.

10. Identification card according to claim 8, characterized in that the said decryption means work according to a point-to-point method.

11. Identification card according to one of the preceding claims,
characterized in that at least one said other system is a computer network, and
10 in that the said other identification parameters permit an identification in this computer network.

12. Identification card according to one of the preceding claims,
characterized in that at least one said other system is a pay TV system, and in
that the said other identification parameters permit an identification in this pay
15 TV system.

13. Identification card according to one of the preceding claims,
characterized in that at least one said other system is a fixed network, and in
that said other identification parameters permit an identification in this fixed
network.

20 14. Identification card according to one of the preceding claims,
characterized in that the said other identification parameters permit an
identification at a financial institution.

15. Identification card according to one of the preceding claims,
characterized in that at least one said other system is a traffic routing system,
25 and in that the said other identification parameters permit an identification in
this traffic routing system.

16. Identification card according to one of the preceding claims,
characterized in that it is a GSM-SIM card.

17. Identification card according to one of the preceding claims, characterized in that the said identification parameters also contain biometric identification parameters.

18. Identification card according to one of the preceding claims,
5 characterized in that in addition one or more other system-dependent identification protocols are contained in the said memory means, which are executed by data processing means in the identification card in order to identify the subscriber in the said other systems.

19. Mobile radio system comprising:

10 a SIM server (3)

a multiplicity of mobile devices (13, 14), which can be connected to said SIM server through a mobile radio network (2), at least certain mobile devices containing an identification card (1), the identification cards containing a contact area in order to connect them to the respective mobile device (13,
15 14), and electronic memory means (10), in which identification parameters of subscribers to the said mobile radio network are stored,

characterized in that one or more other identification parameters are stored in the said memory means for identification of the subscriber in at least one other system, at least one said other system not being a mobile radio
20 network.

20. Mobile radio system according to the preceding claim, characterized in that the said other identification parameters are stored in one or more tables (5), which are accessible to the said SIM server (3), and can be transferred into said memory means (10) from the said tables.

25 21. Mobile radio system according to the preceding claim, characterized in that the said other parameters are stored in the said memory means (10) in a single table (102).

22. Mobile radio system according to claim 19, characterized in that the

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said other identification parameters are stored in the said memory means (10) in different tables (101).

23. Mobile radio system according to claim 19, characterized in that the said other identification parameters are accessible through the said contact
5 area (11) if the card is inserted in a device connected to said other system.

24. Mobile radio system according to claim 19, characterized in that at least certain identification cards contain a plurality of contact areas in order to connect them to various systems (8).

25. Mobile radio system according to claim 19, characterized in that at
10 least certain SIM cards contain in addition an induction coil (12) through which the said other identification parameters can be accessed.

26. Mobile radio system according to claim 19, characterized in that at least certain mobile devices comprise an infrared interface (140) in order to be able to communicate identification parameters to external systems (81, 8).

27. Mobile radio system according to claim 19, characterized in that the
15 said multiplicity of mobile devices (13, 14) is set up in such a way that it can communicate with the said SIM server through SMS messages, and in that the identification parameters stored in the said SMS messages are accessible for storing in the said memory means (10).

20 28. Mobile radio system according to one of the claims 19 to 27, characterized in that the said identification parameters contain biometric identification parameters.

29. Mobile radio system according to one of the claims 19 to 28, characterized in that in addition one or more other system-dependent
25 identification protocols are contained in the said memory means, which are executed by data processing means in the identification card in order to identify subscribers in other systems.

30. Method to identify a mobile telephone subscriber in other systems,

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characterized by the following steps:

storing of identification parameters in a server (3, 7), with which the said subscriber can be identified in the said other system or systems (8), at least one said other system not being a mobile radio network;

5 communication of said identification parameters from the said server to the identification cards (1) of the respective subscriber via a mobile radio network (2), the said identification cards (1) being connected through a contact area (11) to the mobile device (13, 14), and the cards having electronic memory means (10), which contain identification parameters of subscribers to
10 the said mobile radio network;

storing of the said communicated identification parameters of the respective subscriber in the said memory means (10);

use of the said identification cards as identification means in the said other systems.

15 31. Method according to the preceding claim, characterized in that the said communicated identification parameters are encrypted.

32. Method according to claim 30, characterized in that the said other identification parameters can be accessed through the said contact area (11).

33. Method according to claim 30, characterized in that the said other
20 identification parameters can be accessed through an induction coil (12) in the said identification cards.

34. Method according to claim 30, characterized in that the said other identification parameters can be accessed through an infrared interface (140) in the mobile devices (13, 14).

25

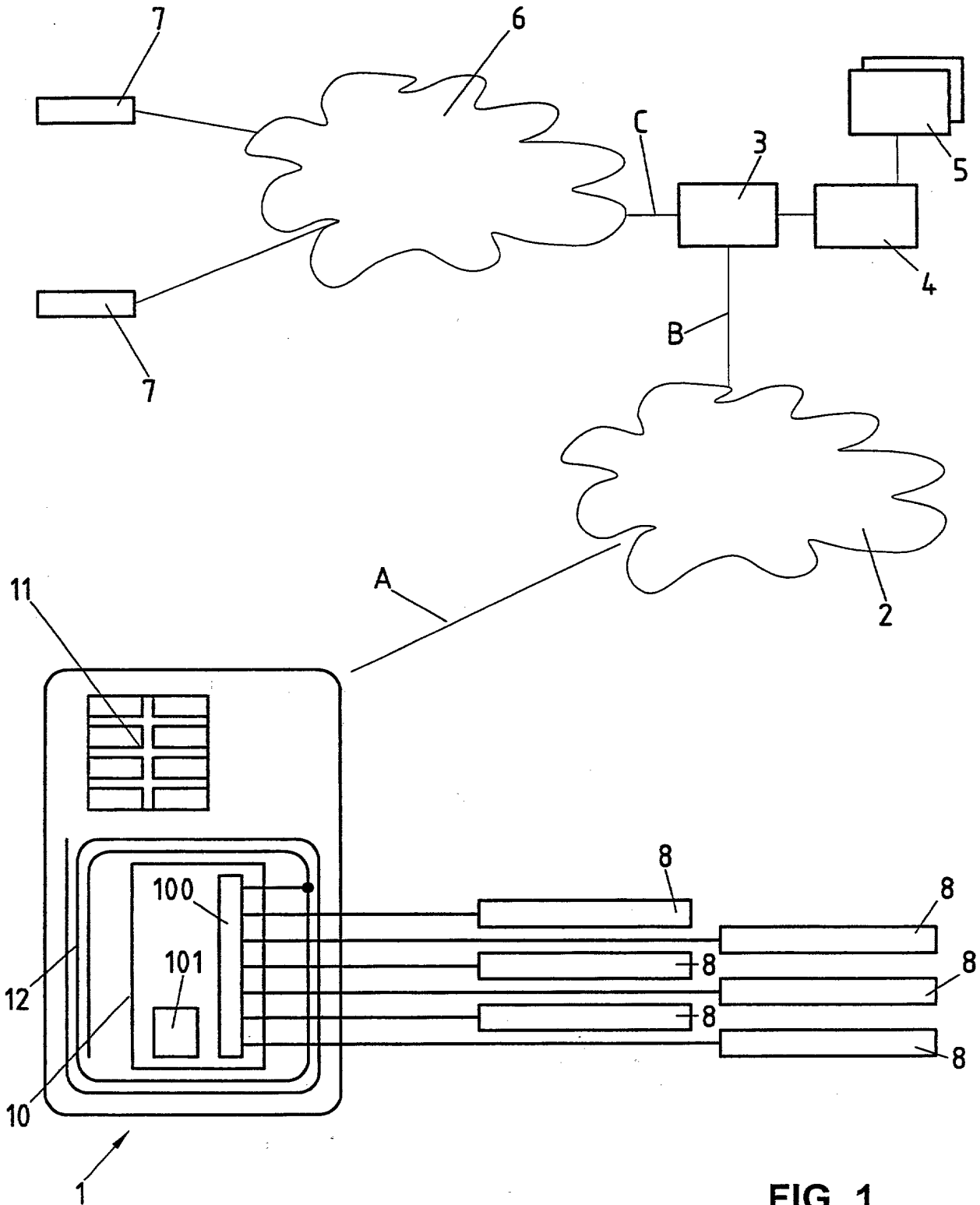


FIG. 1

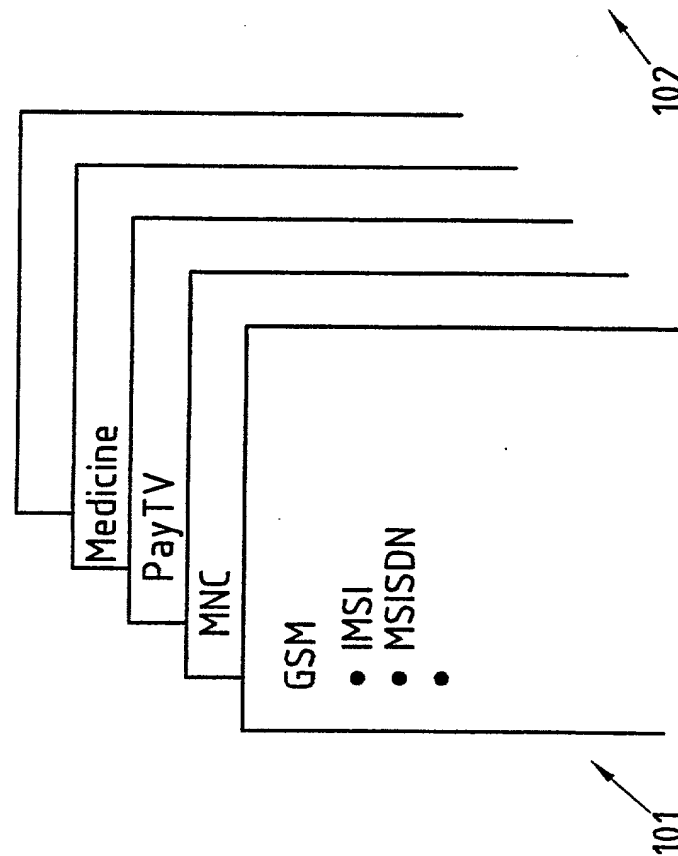


FIG. 2a

Parameter Typ		Parameter
Common	All	x y z
Specific	GSM	IMSI MSISDN usw.
Specific	MNC	a b .
Specific	NC	e f .

1020

1021

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FIG. 2b

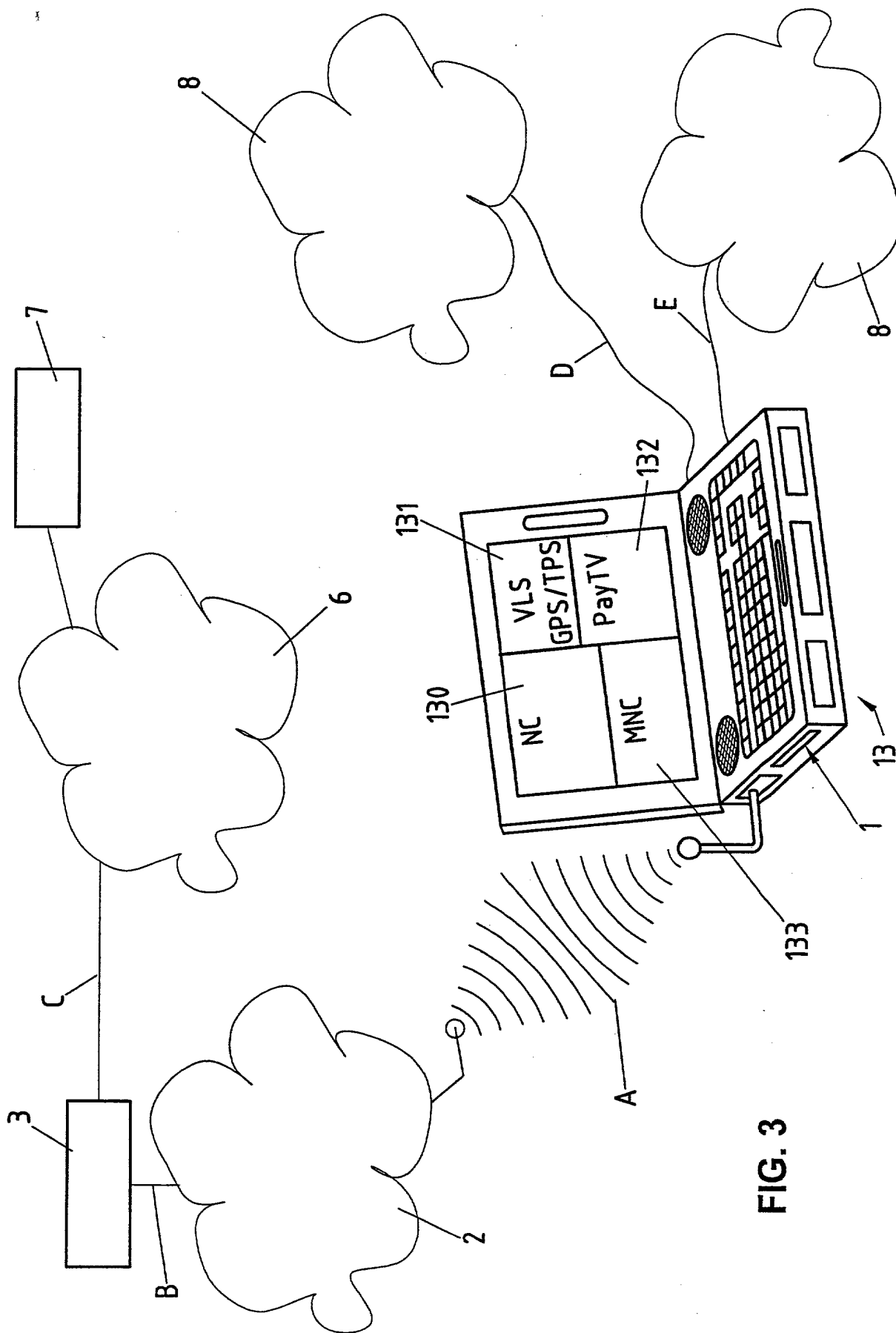


FIG. 3

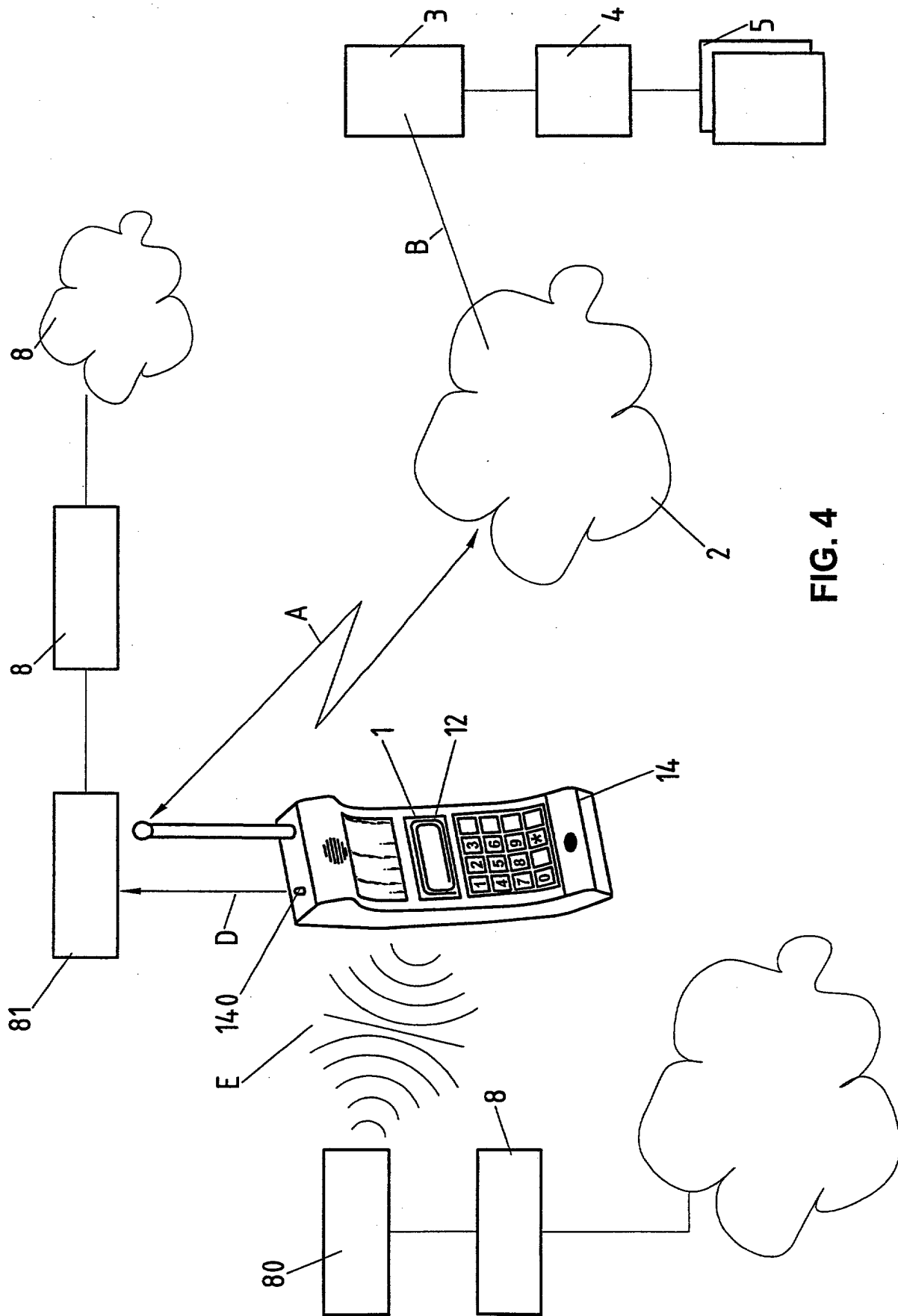


FIG. 4

FOR UTILITY/DESIGN
CIP/PCT NATIONAL/PLANT
ORIGINAL/SUBSTITUTE/SUPPLEMENTAL
DECLARATIONS

RULE 63 (37 C.F.R. 1.63)
DECLARATION AND POWER OF ATTORNEY
FOR PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PM&S
FORM 2000

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the INVENTION ENTITLED

Identification Card and Identification Method

the specification of which (CHECK applicable BOX(ES))

X -> [] is attached hereto.

BOX(ES) -> [] was filed on _____ as U.S. Application No. 0 /

-> [X] was filed as PCT International Application No. PCT/CH97/00425 on 7 November 1997

-> -> and (if U.S. or PCT application amended) was amended on _____

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose all information known to me to be material to patentability as defined in 37 C.F.R. 1.56. I hereby claim foreign priority benefits under 35 U.S.C. 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate filed by me or my assignee disclosing the subject matter claimed in this application and having a filing date (1) before that of the application on which priority is claimed, or (2) if no priority claimed, before the filing date of this application:

PRIOR FOREIGN APPLICATION(S)	Date first Laid-	Date Patented	Priority Claimed		
Number	Country	open or Published	or Granted	Yes	No

I hereby claim domestic priority benefit under 35 U.S.C. 119/120/365 of the indicated United States applications listed below and PCT international applications listed above or below and, if this is a continuation-in-part (CIP) application, insofar as the subject matter disclosed and claimed in this application is in addition to that disclosed in such prior applications, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in 37 C.F.R. 1.56 which became available between the filing date of each such prior application and the national or PCT international filing date of this application:

PRIOR U.S. PROVISIONAL, NONPROVISIONAL AND/OR PCT APPLICATION(S)	Status	Priority Claimed		
Application No. (series code/serial no.)	Day/MONTH/Year Filed	pending, abandoned, patented	Yes	No

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

And I hereby appoint Pillsbury Madison & Sutro LLP, Intellectual Property Group, 1100 New York Avenue, N.W., Ninth Floor, East Tower, Washington, D.C. 20005-3918, telephone number (202) 861-3000 (to whom all communications are to be directed), and the below-named persons (of the same address) individually and collectively my attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent, and I hereby authorize them to delete names/numbers below of persons no longer with their firm and to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/ organization who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct the above firm and/or a below attorney in writing to the contrary.

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(FOR ADDITIONAL INVENTORS, check box [] and attach sheet (PAT-116.2) for same information for each re signature, name, date, citizenship, residence and address.)